IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appellant:	Thomas
Serial No.:	10/759,523
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Group Art Unit:	3683
Examiner:	King, Bradley T.
Title:	DISC BRAKE ASSEMBLY

Mail Stop Appeal Brief- Patents
Commissioner for Patents
P.O. Box 1450
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REPLY BRIEF

Dear Sir:

This is in reply to the Examiner's Answer mailed January 29, 2007. The Examiner's Answer raises several arguments which require some brief response.

ARGUMENTS

The Examiner states on page 4 of the Examiner's Answer that it would be obvious to include spring lugs as taught by Heinz et al. on a central portion 26 of a clip 18 of EP'378. EP'378 discloses a clip 18 having ends that each engage a projection 16 of a backplate 10 (Figure 1). The central portion 26 is spaced from the backplate 10 by a small gap (Figure 3) that allows installation of a bridge 32 of the caliper (column 3, lines 7 to 22). The ends of the clip 18 remain in contact with the backplate 10, and a central portion 26 of the clip 18 remains in contact with the bridge 32. Any movement of the brake pad relative to the caliper (such as when the vehicle hits a large bump) causes the brake pad to bounce upwardly relative to the caliper, slightly closing the gap between the clip 18 and the backplate 10. The gap allows the clip 18 to properly flex and correctly perform its function.

In Heinz et al., the relationship of the clip 1 with the caliper and the brake pad 9 is reversed as compared with EP'378. A central portion of the clip 1 is held rigidly relative to a backplate (Figure 3 and 3A), and ends 3 of the clip 1 engage a caliper (shown in Figure 7). If a vehicle hits a bump, the brake pad 9 **and a central portion of the clip 1** move upwardly relative to the rest of the caliper. That is, with respect to the clip 1, this movement is opposite to the movement of the clip 18 of EP'378.

If lugs were added to the clip 18 of EP'378, both ends and the central portion 26 of the clip 18 would be rigidly attached to the backplate 10 by the lugs. Therefore, the clip 18 would be retained in three places and could not flex, preventing the clip 18 from functioning correctly. Due to the inevitable manufacturing tolerance errors, either the bridge 32 could not be fitted (if the top of the central portion 26 of the clip 18 was too high) or the backplate 10 would rattle when the vehicle was in use (if the top of the central portion 18 of the clip 18 was too low).

The Examiner also argues that the lugs 5 and 6 of Heinz et al. would "ensure proper retention, thereby **increasing** the security of the device." However, there is no evidence that adding lugs to the clip 18 would **increase** security. The Examiner is essentially arguing that adding lugs provides **better** security. However, this is only necessary if the spring holding system that secures the clip 18 of EP'378 to the backplate 10 **actually fails**. There is no evidence that the clip 18 is insufficiently held, or that the addition of lugs 5 and 6 would provide greater security. The spring holding system is only required to last the lifetime of the brakepad, i.e., until the brakepad wears out. When this occurs, the brakepad and the clip 18 are both replaced. Therefore, the Examiner's arguments that the "benefits of greater retention in some applications can outweigh the increase costs associated with production" (page 5) is moot since there is no **greater** retention.

Additionally, the Examiner is essentially arguing that the retention system of EP'378 is not sufficient under all circumstances, and therefore the retention system could potentially fail. However, using this analogy, the retention system as used on Heinz et al. alone will also not be sufficient and will fail under certain circumstances. The Examiner argues that the lugs 5 and 6 of Heinz et al. would provide a **better** retention system. However, this would only help assuming that

the retention system of EP'378 fails **before** the lugs fail. In contrast, if lugs were applied to the clip 18 and failed first, the resultant combination would be **no better** than the clip 18 in isolation. There is no evidence that the retention system of EP'378 will fail first prior to lugs. Without this evidence, it is impossible to say that the combination of EP'378 and Heinz et al. is **better**.

Even if lugs were added to the clip 18 of EP'378 and the original retention system failed, the lugs would **not** carry out their correct function. As mentioned above, the ends of spring 18 of EP'378 are held onto lugs 16 of the backplate 10. The lugs of the clip 1 of Heinz et al. clamp tightly onto the backplate to prevent the ends 3 of the clip 1 from twisting relative to the backplate. If the lugs only "loosely" held the clip 18 of EP'378 onto the pad, the "loose" connection would allow the clip 18 to flex to hold the brake pad in place during use. However, taking the Examiner's assumption that the original retention system of EP'378 fails, the lugs would not prevent the clip 18 from twisting relative to the backplate because the lugs only "loosely" hold the clip 18. The lugs will also not prevent the clip 18 from twisting, disengaging the ends of the clip 18 from the pad and being unable to prevent the pad from rattling in use. Clearly one skilled in the art would not combine the lugs 5 and 6 of Heinz et al. with the clip 18 of EP'378 to provide a retention system that was no better yet more expensive.

Finally, in the paragraph bridging pages 5 and 6 of the Examiner's answer, the Examiner rejects Appellant's previous arguments concerning potential cracks in the lugs 5 and 6 of Heinz et al. The Examiner states that "no convincing support or evidence for this statement has been provided" (page 5), and that "nothing in the prior art record indicates that the modification would result in the weaker spring" (page 6). However, nothing in the prior art suggests that the retention system of EP'378 is insufficient or suggests that the retention system of EP'378 would fail before the "new" lugs 5 and 6 from Heinz et al.

There is no motivation to make the proposed combination and use lugs on the clip 18 of EP'378. The claimed invention is not obvious.

CONCLUSION

For the reasons set forth above, the rejection of all claims is improper and should be reversed. Appellant respectfully requests such an action.

Respectfully Submitted,

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CERTIFICATE OF FACSIMILE

I hereby certify that this reply brief is being facsimile transmitted to the United States Patent and Trademark Office, 571-273-8300 on March 28, 2007.

Amy M. Spaulding

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